Demonstration

Clinical Trial
Schedule Manager

Sept. 21, 2001

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Project Goals

- Research and demonstrate information display technologies useful to non-clinical personnel involved in clinical trials
- Explore the use of flexible map-based display technology in a client-server environment

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Scenario Background

- Alice Crowley has been diagnosed with breast cancer

- She has enrolled in a breast cancer clinical trial at UC San Diego Cancer Center

- She must now meet with the Treatment Coordinator to schedule her exams and treatments

Scenario Participants

Patient (Alice)

- Wants to get effective treatment
- Wants to maintain her quality of life
- Lives 100 miles away from San Diego
- Is unfamiliar with the San Diego area
- Find the whole experience overwhelming

Treatment Coordinator

- Helps patients get to all treatments
- Provides to patients information about available resources
- Must juggle multiple patients and trials
- Must access information from multiple sources

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Prior to the Meeting – Patient

- Gets the clinical trial name and number when she enrolled in the clinical trial
- Gets directions to to cancer center when she enrolled in the clinical trial
- Gathers her medical history and insurance information

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Prior to the Meeting – Treatment Coordinator

- Receives the clinical trial protocol
- Receives information about facilities involved in the clinical trial
- Receives basic information (name, address, phone number) about the patient

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Clinical Trial Schedule Manager (CTSM)

CTSM is a client-server application running on the Treatment Coordinator's desktop computer.

CTSM requires a copy of Microsoft Office and Microsoft *MapPoint* 2002.

The treatment Coordinator will use CTSM to prepare for the patient's visit by entering:

- Clinical trial information
- Facility information
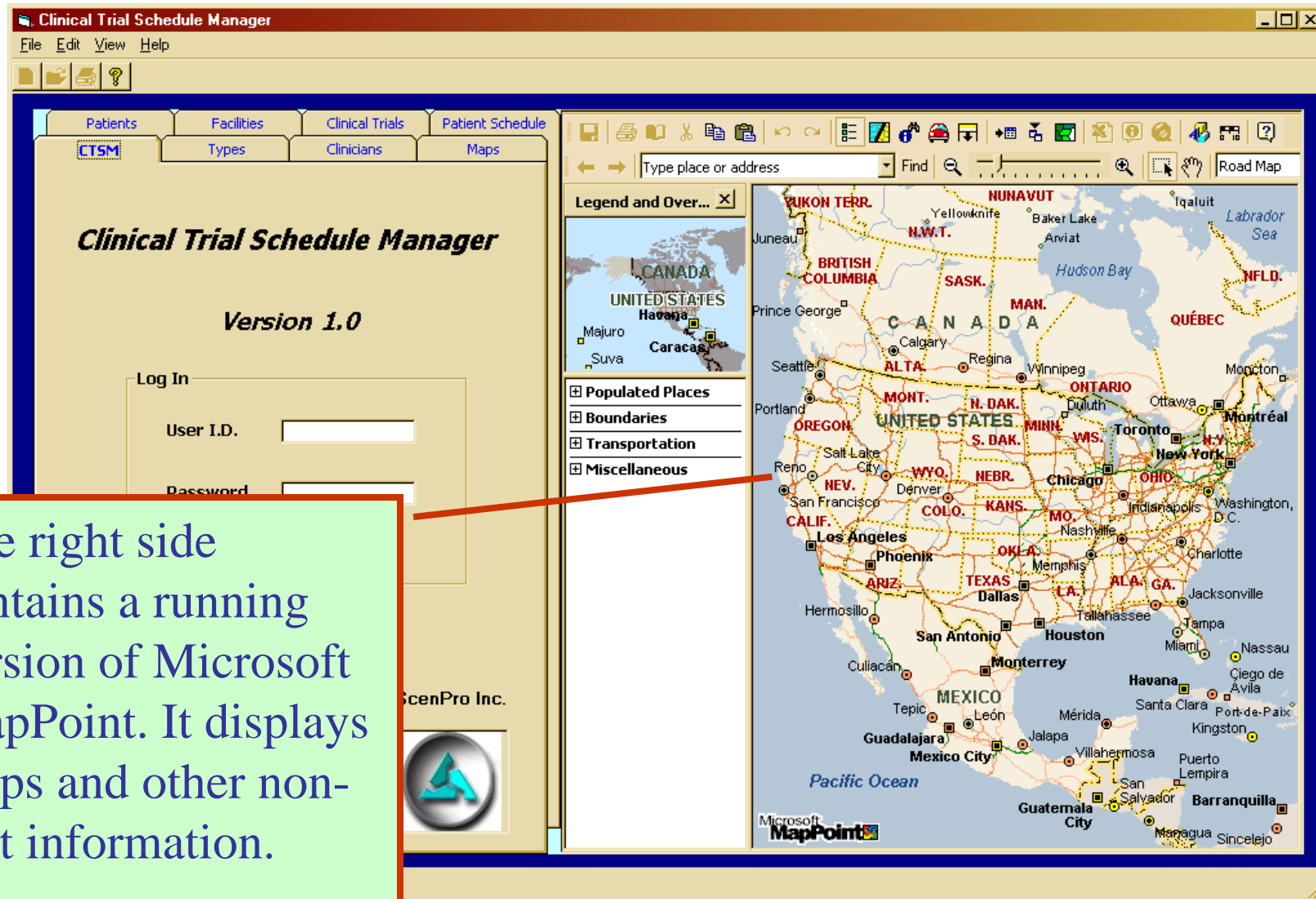- Clinician information
- Basic Patient information

CTSM User Interface

The left side contains dialog boxes for data entry, command buttons, and display of text information.

CTSM User Interface

Users navigate through dialog boxes using tabs at the top of the interface.

CTSM User Interface

The right side contains a running version of Microsoft MapPoint. It displays maps and other non-text information.

Clinical Trials

The Treatment Coordinator's uses the *Clinical Trials* tab to record details about the clinical trial:

• Name

• ID

• Start date

• Principal investigator

• Facilities involved

• Clinicians involved

Facilities

The Treatment Coordinator's uses the *Facilities* tab to record details about facilities:

• Name

• Address

• Phone Number

• Hours of Operation

• Facility Type

Clinicians

The Treatment Coordinator's uses the ***Clinicians*** tab to record details about clinicians:

• Name

• Contact Information

• Type (specialty)

• Facilities associated with

Patients

The Treatment Coordinator's uses the **Patients** tab to record details about patients:

• Name

• Contact Information

The Day of the Meeting

- Alice drives to the cancer center
- Alice finds the correct building and the Treatment Coordinator's office
- Treatment Coordinator begins by interviewing Alice

Patient Interview

The Treatment Coordinator's updates Alice's information in CTSM:

- Verifies Name and Contact Info
- Insurance Information
- Primary Physician
- Clinical Trial
- Facilities Used

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Reviewing Treatment

The Treatment Coordinator consults the Protocol and reviews Alice's treatment plan with her:

- Chemotherapy (4 courses over 12 weeks)
- Strict diet
- Breast conserving surgery after chemotherapy is completed
- Post-operative radiation therapy
- Daily oral Tamoxifen after radiation

Scheduling Treatments

- The Treatment Coordinator reviews the available appointment slots
- Alice would like to group an entire week's appointments on the same day
- Alice and the Treatment Coordinator work together to set the appointments
- The Treatment Coordinator uses CTSM to record each appointment

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Recording Appointments

The Treatment Coordinator's records each appointment using CTSM:

• Patient

• Date

• Time

• Facility

•Description

Finding Other Facilities

Alice needs to find several other facilities besides the cancer center:

- Dietician for the clinical trial
- Pharmacy that takes her insurance
- Nearby hotel

The Treatment Coordinator uses CTSM to locate these facilities for Alice

Other Facilities Map

Appointment Maps

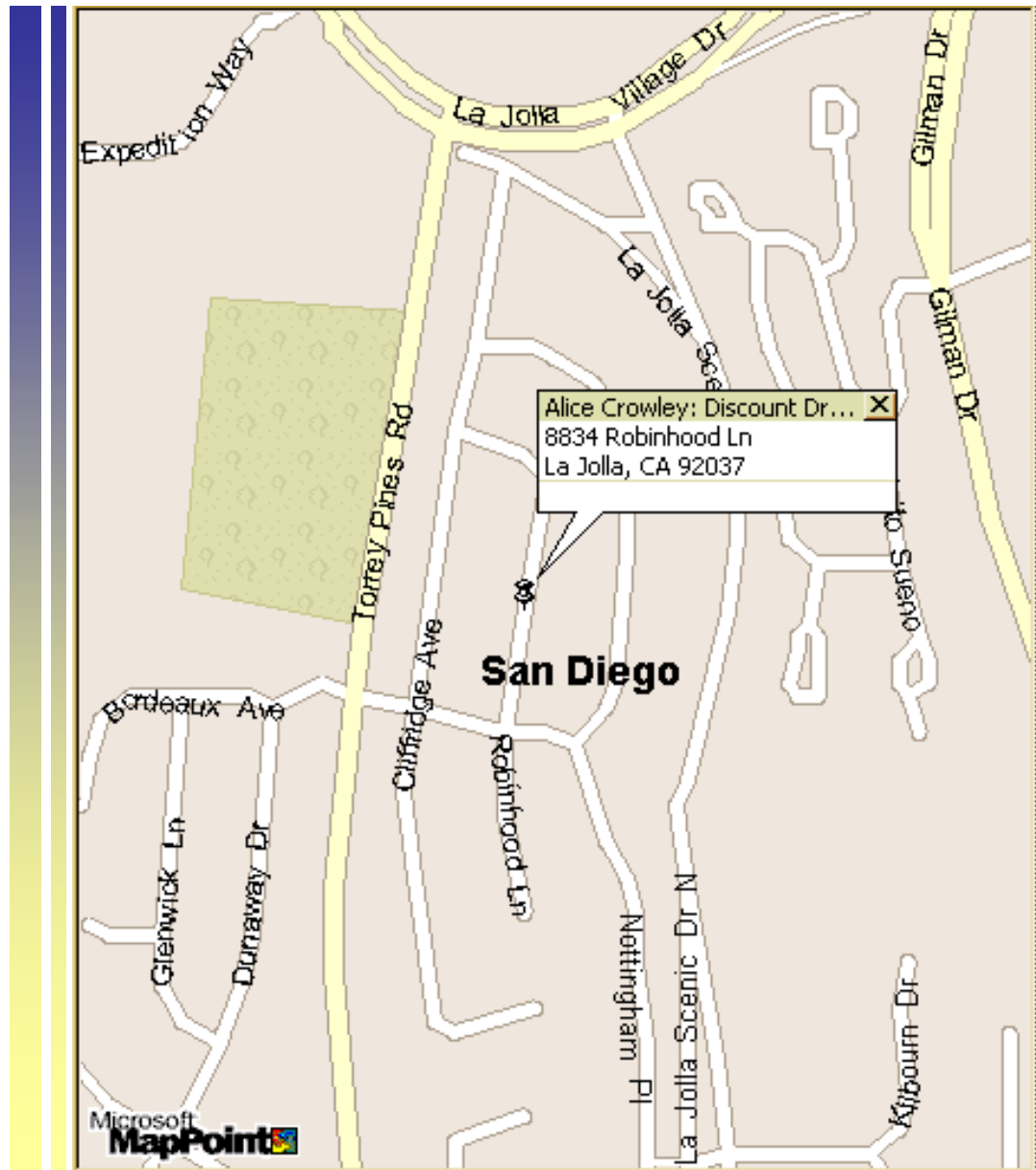The Treatment Coordinator uses CTSM to print appointment maps for Alice:

- All locations where she has appointments
- Detail street map for each facility
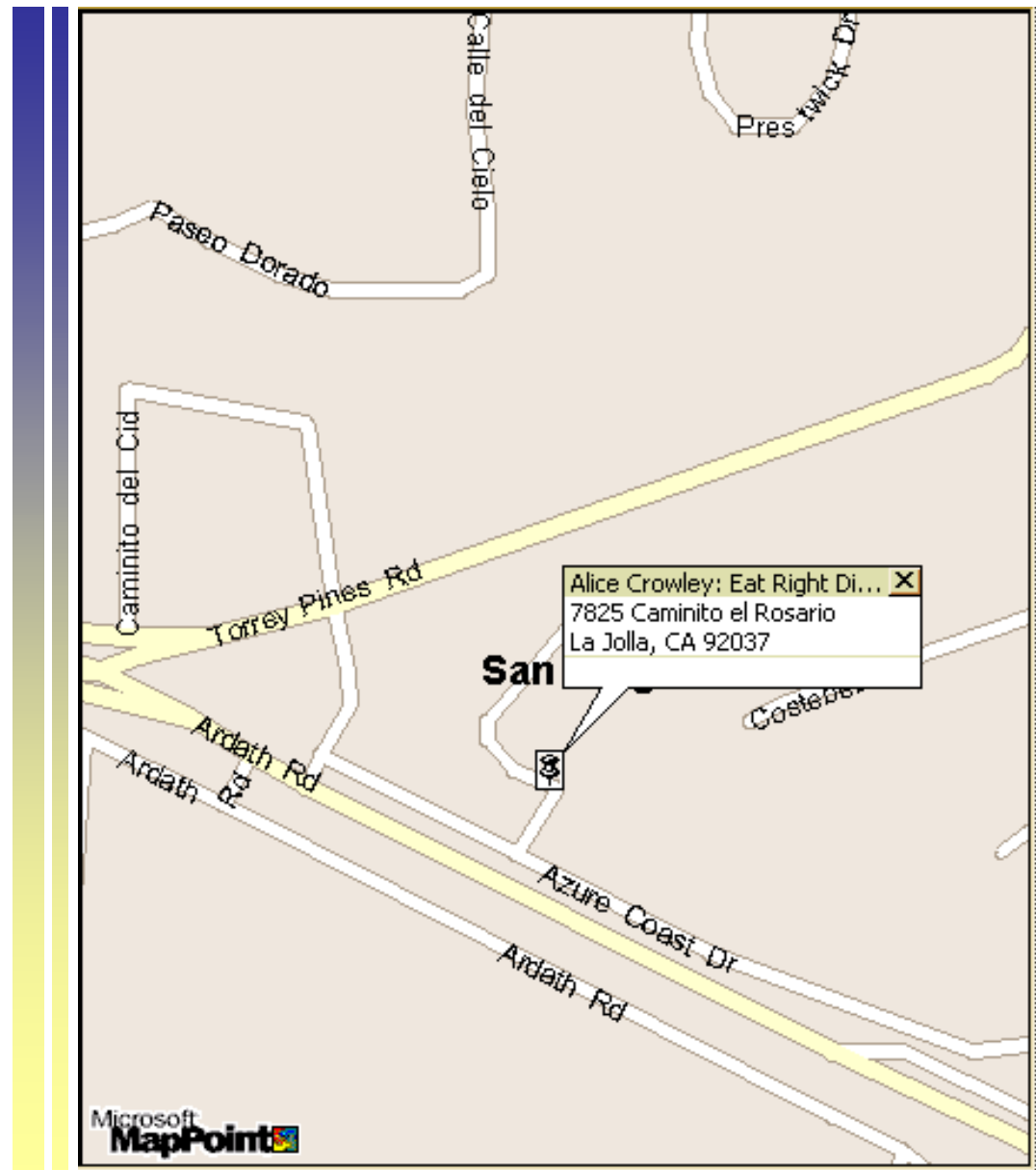- Locations of her first day's appointments
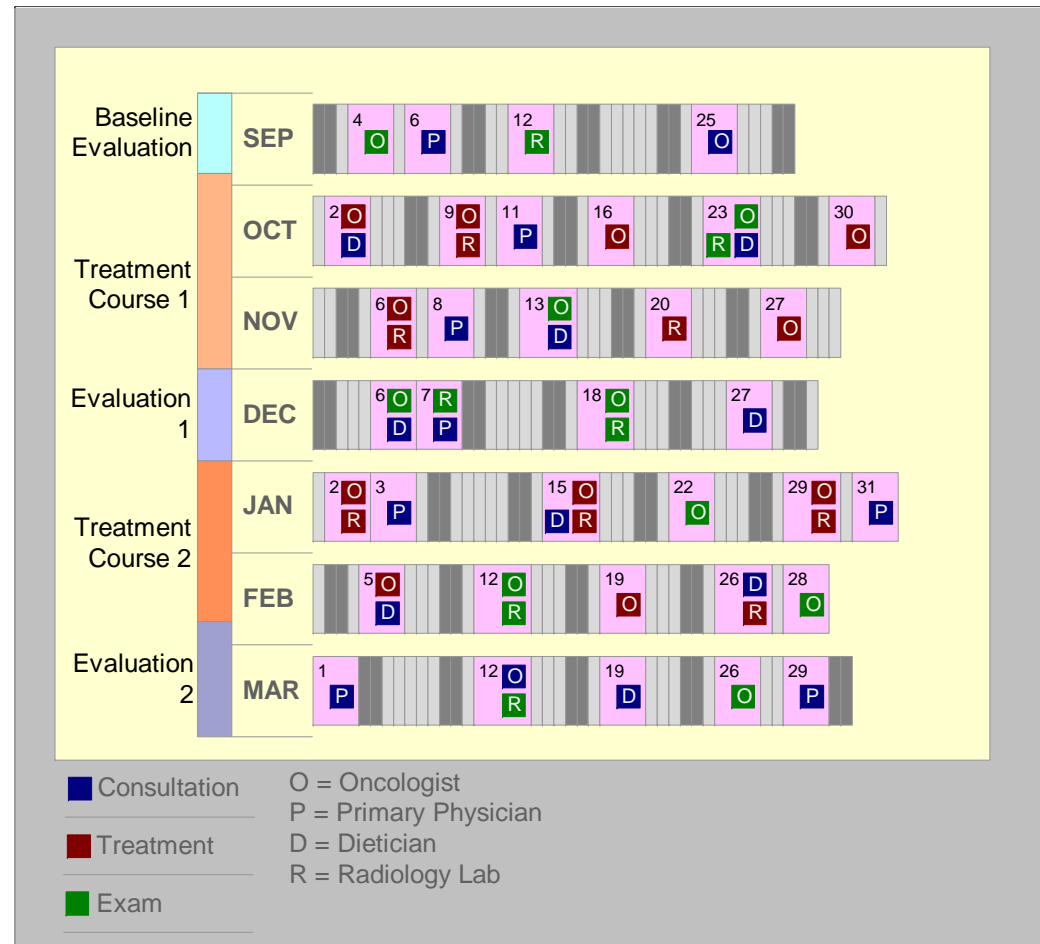
All Locations Map

Facility Street Maps

Facility Street Maps

Appointment Schedule

Future versions of CTSM could produce a graphical display of all a patient's appointments.

This data could be emailed to the patient for review in a Personal Digital Assistant.

Meeting Conclusion

The Treatment Coordinator reviews the following items she has given Alice to be sure they are understood correctly:

• Description of treatment

• Schedule of appointments

• Contact information

• Printed maps of facility locations

The Treatment Coordinator and Alice schedule a follow-up meeting on the day of her next-to-last chemotherapy session.

After
the Meeting

In the subsequent weeks, the Treatment Coordinator periodically contacts Alice to check on her and remind her of appointments.

Future versions of CTSM will be able to automatically generate email reminders and prompt the Treatment Coordinator about follow-ups.

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Conclusions

- Microsoft MapPoint is well-suited to this application. It is:
  – Powerful
  – Flexible
  – Easily integrated
- MapPoint contains numerous features that we did not have time to include in the prototype (route planning, direction lists, feature highlight).
- However, there are few resources for programmers who want to use MapPoint.
- A tool like CTSM could be useful to treatment coordinators and patients involved in clinical trials.
- Acceptance of CTSM might depend on integrating it into existing practice management system databases.

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